

## **REMARKS**

Applicant responds hereby to the Final Office Action dated April 14, 2008. Claims 1, 7, 11-12, and 15-16 are amended hereby. Claims 13-14 and 17 were previously cancelled without prejudice or disclaimer of subject matter. Claims 12 and 15 are being cancelled without prejudice or disclaimer of subject matter. Claims 18-19 are added without entering new matter. Claims 1-11, 16 and 18-19 remain pending hereinafter, where Claims 1, 11 and 16 are independent claims.

Favorable consideration and allowance of the claims of the present application are respectfully requested.

### **Rejection under 35 U.S.C. § 112, 2<sup>nd</sup> paragraph**

Claims 12 and 15 are rejected under 35 U.S.C. § 112, 2<sup>nd</sup> paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. In response, Claims 12 and 15 are cancelled without prejudice or disclaimer of subject matter. Claims 18 and 19 are newly added without entering new matter. Subject matter of Claims 18 and 19 are supported in Claim 1, Claim 11, and a paragraph [60] of the present application's corresponding Pre-Granted Publication (US2004/0107295 A1). Therefore, no new matter is entered. Claim 18 is directed to a computer program product incorporating subject matter of Claim 1. Claim 19 is directed to a computer program product incorporating subject matter of Claim 11.

### **Rejections under 35 U.S.C. § 103(a)**

The Examiner rejects Claims 1, 2, 6, 11-12 and 15-16 under 35 U.S.C. § 103(a) as being allegedly unpatentable over Uga et al. ("A fast compact longest match prefix look-up method using pointer cache for very long network address") (hereinafter "Uga") and further in view of Kadambi et al. (US 6,795,447 B2) (hereinafter "Kadambi").

The Examiner alleges in the Final Office Action that Kadambi discusses "a default-route-prefix is provided only in a routing table cache" required by Claims 1 and 16. Though Kadambi discusses an IP longest prefix cache lookup at Col. 26 lines 10-22, Kadambi does not discuss the IP longest prefix is provided only in a cache. Furthermore, Claims 1 and 16 are being

amended to recite “wherein the default-route-prefix ( $P_d$ ) is a shortest prefix that covers only destination IP addresses that have no matching prefix in the routing table ( $L_2$ )”. The added limitation is found in paragraph [0039] of the corresponding Pre-Granted Publication (US2004/0107295 A1). Therefore, no new matter is entered. As stated above, Kadambi discusses an IP longest prefix cache lookup. The amended Claims 1 and 16 states the default-route-prefix in a routing table cache is a shortest prefix that covers only destination IP addresses that have no matching prefix in the routing table. Therefore, the added limitation is not taught or suggested by Kadambi. Uga at page 597, right-hand column, second paragraph discusses a prefix match a network address. However, Uga does not teach or suggest “the default-route-prefix is a shortest prefix that covers only destination IP address that have no matching prefix in the routing table”. Therefore, the added limitation is not taught or suggested by Uga, Kadambi, whether alone or in combination.

Claims 1 and 16 states “the routing table cache comprises a prefix that is a part of a destination IP address and the destination IP address”. The Examiner alleges that Uga discusses “the routing table cache comprises a prefix that is a part of a destination IP address and the destination IP address” at page 597, third paragraph. However, the third paragraph at page 597 of Uga discusses a tree (a routing table) traversal. Further, Figure 6 of Uga shows nodes in the routing table (tree) having prefixes and an IP address for routing to an outgoing route. However, Figure 6 of Uga does not teach or suggest a routing table cache having routine entries comprising a prefix and a destination IP address. Uga states at page 595, right-hand column, last paragraph, “the routing table can be arranged in a tree-structure such as Trie or Patricia”. Figure 6-8 shows an aggregation node exists in a tree, which represents a routing table. Therefore, the third paragraph at page 597 of Uga and Figure 6-8 do not discuss “the routing table cache comprises a prefix that is a part of a destination IP address and the destination IP address”. Though Uga discusses CAM8 at Figure 5, CAM8 has an aggregated prefix and a pointer to intermediate node in the tree. (Uga states at page 597, left-hand column, first paragraph, “Each entry in the cache has a pointer to an intermediate node in the tree”.) A pointer, as implemented in the routing table of Uga, is an address of a memory device and is not a destination IP address. Figure 4 of Uga clearly indicates that a pointer from CAM8, CAM16 and CAM24 references a node in the tree, which is a routing table. Therefore, Uga does not teach or suggest “the routing table cache comprises a prefix that is a part of a destination IP address and the

destination IP address". Though Kadambi discusses an IP longest prefix cache lookup at Col. 26 lines 10-22, Kadambi does not discuss "the routing table cache comprises a prefix that is a part of a destination IP address and the destination IP address" required by Claims 1 and 16.

Therefore, Claims 1 and 16 are patentably distinct over Uga, Kadambi, whether alone or in combination.

Claims 2 and 6 depend on Claim 1 and are patentable therewith.

Claim 11 is being amended to recite "wherein the default-route-prefix ( $P_d$ ) is a shortest prefix that covers only destination IP addresses that have no matching prefix in the routing table ( $L_2$ )". The added limitation is found in paragraph [0039] of the corresponding Pre-Granted Publication (US2004/0107295 A1). Therefore, no new matter is entered. As stated above, the added limitation is not taught or suggested by Uga, Kadambi, whether alone or in combination. Therefore, Claim 11 is patentably distinct over Uga, Kadambi, whether alone or in combination.

Claims 12 and 15 are cancelled without prejudice or disclaimer of subject matter. Accordingly, the Examiner is respectfully requested to withdraw the rejections of Claims 1, 2, 6, 11-12 and 15-16 under 35 U.S.C. § 103(a) over Uga and further in view of Kadambi.

The Examiner rejects Claims 3-5 and 7-10 under 35 U.S.C. § 103(a) as being allegedly unpatentable over Uga in view of Kadambi and further in view of Kobayashi et al. (US 6,768,739) (hereinafter "Kobayashi").

Claims 3-5 and 10 depend on Claim 1 and are patentable therewith.

Claim 7 is being amended to recite "the covering path entries covering all prefixes that exist in the routing table ( $L_2$ )". The added limitation is supported in paragraph [0052] of the corresponding Pre-Granted Publication (US2004/0107295 A1). Therefore, no new matter is entered. Uga states at page 597, right-hand column, second paragraph "Prefixes which are not in the routing table are aggregated into the aggregation node". Therefore, the aggregated node in Uga covers prefixes which are not in the routing table. However, the amended Claim 7 of the

present application states "the covering path entries covering all prefixes that exist in the routing table". Therefore, the covering path entries in the amended Claim 7 cover prefixes that exist in the routing table.

Claims 8 and 9 depend on Claim 7 and are patentable therewith.

Accordingly, the Examiner is respectfully requested to withdraw the rejections of Claims 3-5 and 7-10 under 35 U.S.C. §103(a) over Uga in view of Kadambi and further in view of Kobayashi.

#### Conclusion

In view of the foregoing, this application is now believed to be in condition for allowance, and a Notice of Allowance is respectfully requested. If the Examiner believes a telephone conference might expedite prosecution of this case, it is respectfully requested that he call the applicant's attorney at (516) 742-4343.

Respectfully submitted,



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